Database Tech Step Lesson redesigned for a unit on the Solar System

Teachers, this is a project that can be completed throughout a 1.5 - 2 week solar system unit. Make sure to have days 1 and 2 follow each other to keep the introductory information fresh in students mind. Also, provide several days between days 3 and 4 to give yourself enough time to have the central database created prior to students using it on day 4.

EQ: How do the parts of the solar system effect one another?

Day 1

-In the classroom, introduce the project to students. Present the list of topics and have students sign-up for their preference. If students will have difficulty researching individually, place the students in pairs.

Topics List: Sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Neptune, Uranus, Pluto, all Moons, asteroids, meteors, dwarf star, Milky Way belt, etc.

- Assign topics to students and have each student to start researching their topic using their textbook and any other print resources that you have in the classroom (encyclopedias, magazines, etc.). Students are to create their own graphic organizer for their notes. This will be used tomorrow in the computer lab.

Day 2 (Rubric part 1 and 2)

Teachers, prior to this day, you must have the prepared database file saved in a location that your students can open it. This might be an attachment on Edline, Moodle, or other website. You can also save it to the Common folder on your school server. Be prepared to walk students through the steps of opening this file.

- Ask students to use the EQ and their prior knowledge to determine what fields should be on the database sheet. Discuss.

-After deliberating, have students open the prepared file and add the agreed upon columns onto their spreadsheets if needed. Save the file in the correct folder on the computer/server.

-Now ask students what possible answers can be chosen for the Orbital Pattern column. Show students how to add a list to select from – Data – Data Tables – Data validation – Settings – Allow – List – Source and type in the possible answers for the field. (Add data validation on Tech Steps)

-Assign each member of the group certain columns of the file to complete for their topic. This will be completed in class tomorrow. Make sure to save all files at the end of class.

Day 2 (Rubric parts 3, 4, and 5)

* Research all information and complete the Excel file.
* Upload the file to the location the teacher will have access to open it: Moodle, flash drive, folder on the server, etc.
* Meet during advisory to create your central database.

Day 3 (Rubric parts 6 and 7)

Teachers, it is recommended that this is several days later to ensure that you have enough times to create the central database. Save the completed file in the same location as the original so that students can open it during class.

* Finish creating the central database during advisory time if necessary.
* Open the central database and instruct students on how to sort and filter records.
* Students are now to create a product answering the EQ that uses the information from the central database. This might include writing a news article, creating a graphic organizer, writing/illustrating a children's book, or making a timeline about the solar system. At the bottom of the submission, students must explain what they did in their excel file to find the information used in their news article or graphic organizer.

Teachers, this lesson uses a course in moodle. If you would like to use it with your students, please email [lbarton@access.k12.wv.us](mailto:lbarton@access.k12.wv.us) and Lezlie Barton will assist you.